

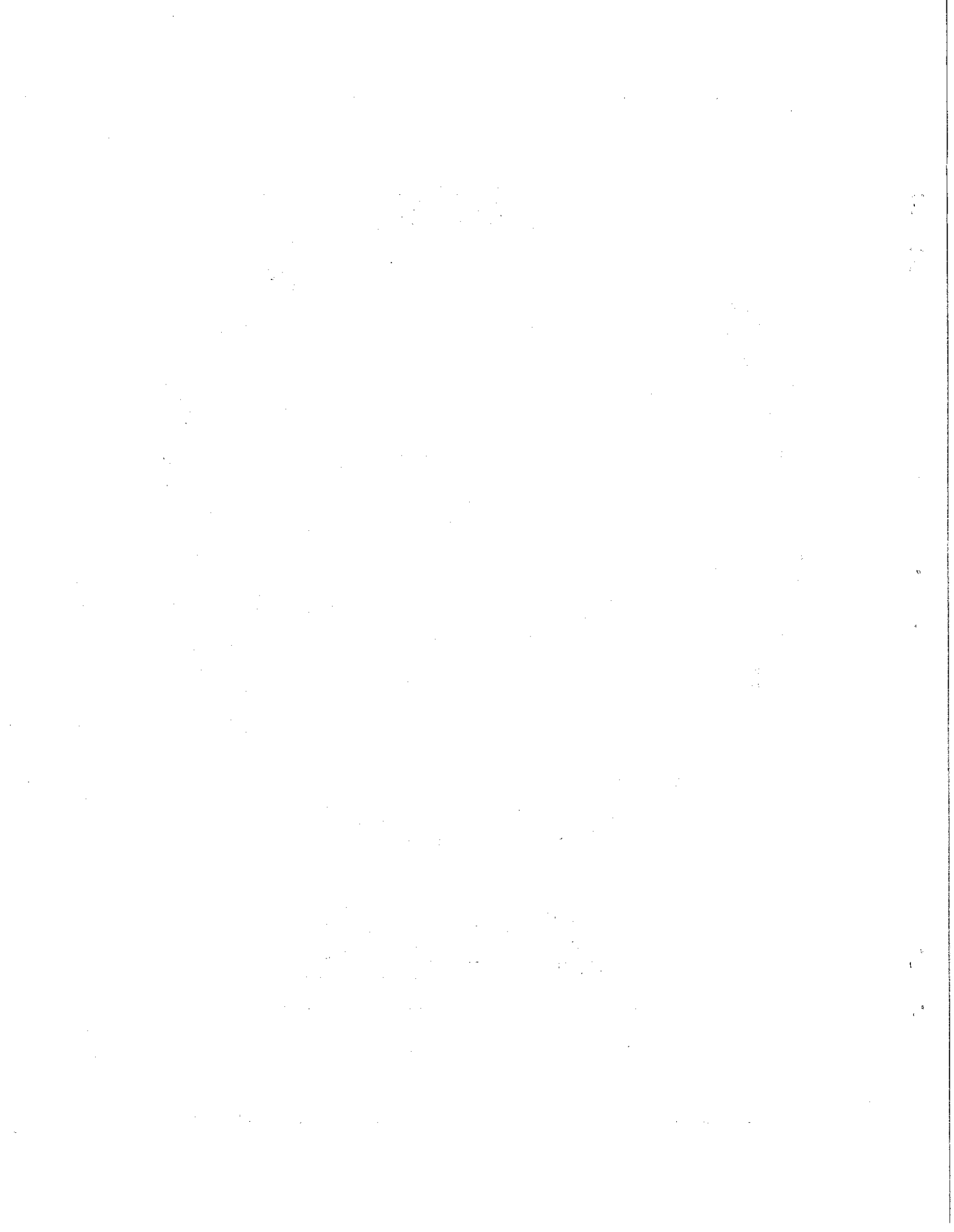
Environmental review team report



RC & D

EASTERN CONNECTICUT
RESOURCE CONSERVATION AND DEVELOPMENT PROJECT

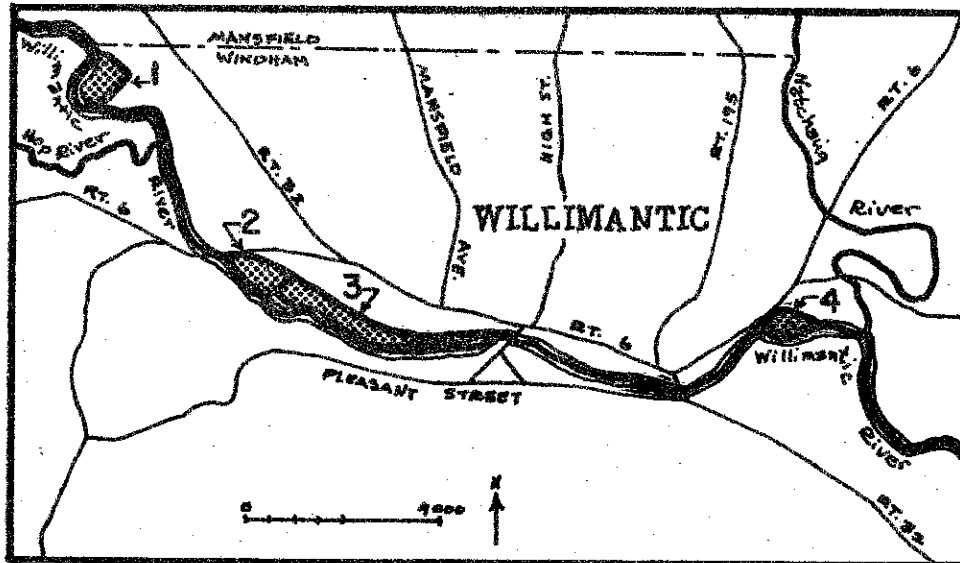
ASSISTED BY: U.S. DEPARTMENT OF AGRICULTURE,
SOIL CONSERVATION SERVICE AND COOPERATING AGENCIES



ENVIRONMENTAL REVIEW TEAM REPORT
ON
FOUR WILLIMANTIC RIVER
RECREATION SITES
APRIL, 1976

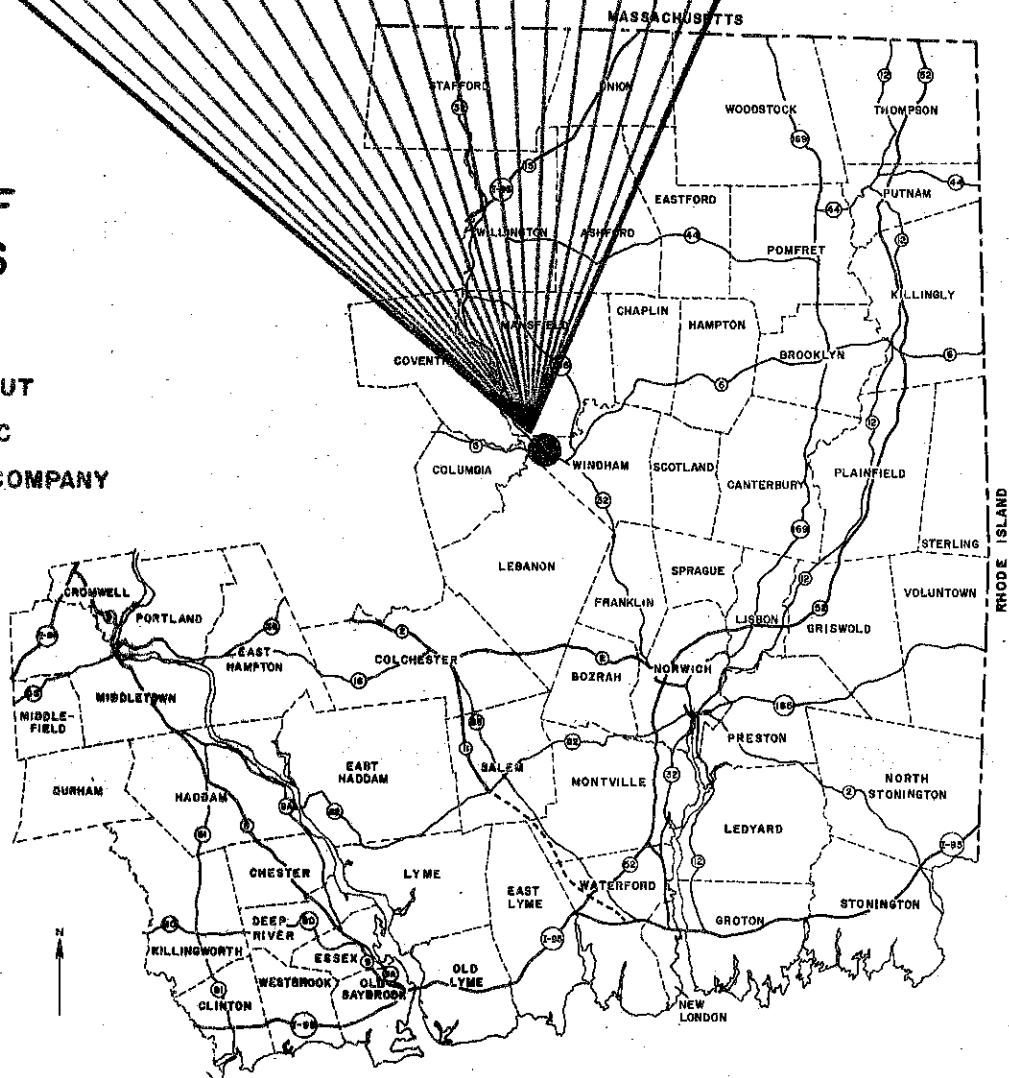
*The preparation of this report was assisted
by a grant under Title 1, Section 107(a)4 of
the Housing and Community Development Act
of 1974, 24 CFR, Part 570, Section 570.406.*

EASTERN CONNECTICUT RESOURCE CONSERVATION AND DEVELOPMENT PROJECT
Environmental Review Team
139 Boswell Avenue
Norwich, Connecticut 06360



LOCATION OF STUDY SITES

- 1—TOWN OF WINDHAM
- 2—STATE OF CONNECTICUT
- 3—CITY OF WILLIMANTIC
- 4—AMERICAN THREAD COMPANY



**EASTERN CONNECTICUT
RESOURCE CONSERVATION AND DEVELOPMENT PROJECT**

ENVIRONMENTAL REVIEW TEAM REPORT
ON
FOUR WILLIMANTIC RIVER RECREATION SITES
WINDHAM, CONNECTICUT

This report is an outgrowth of a request from the City of Willimantic, with permission of the landowners, to the Windham County Soil and Water Conservation District (S&WCD). The S&WCD referred this request to the Eastern Connecticut Resource Conservation and Development (RC&D) Project Committee for their consideration and approval as a project measure. The request was approved and the measure reviewed by the Eastern Connecticut Environmental Review Team (ERT).

The soils of the site were mapped by a soil scientist of the United States Department of Agriculture (USDA) Soil Conservation Service (SCS). Reproductions of the soil survey, a table of soils limitations for certain land uses, and a topographic map of the sites were forwarded to all ERT participants prior to their field review of the sites.

The ERT that field-checked the properties consisted of the following personnel: Al Weeks, District Conservationist, SCS; Tim Dodge, Wildlife Biologist, SCS; Dan Meade, Geologist, Connecticut Department of Environmental Protection (DEP); Andy Petracco, Recreation Specialist, DEP; Joseph Piza, Fisheries Biologist, DEP; George Cloutier, Forester, DEP; Lester Barber, Regional Planner, WRPA; and Linda Simkanin, ERT Coordinator, Eastern Connecticut RC&D Project.

The Team met and field-reviewed the site on Thursday, January 22, 1976. Reports from each Team member were sent to the ERT Coordinator for review and summarization for the final report.

This report is not meant to compete with private consultants by supplying site designs or detailed solutions to development problems. This report identifies the existing resource base and evaluates its significance to the proposed development and also suggests considerations that should be of concern to the developer and the Town of Windham. The results of this Team action are oriented toward the development of a better environmental quality and the long-term economics of the land use.

The Eastern Connecticut RC&D Project Committee hopes you will find this report of value and assistance in making your decisions on this particular site.

If you require any additional information, please contact: Miss Linda M. Simkanin, Environmental Review Team Coordinator, Eastern Connecticut RC&D Project, 139 Boswell Avenue, Norwich, Connecticut 06360, 889-2324.

INTRODUCTION

The ERT was asked to field-check four parcels of land located along the Willimantic River for their recreation or open space potential. As illustrated on the topographic map on the following page, the four parcels border on different sections of the River, and vary considerably in acreage.

At present no definite plans exist for any of the sites, although the City of Willimantic would like to begin construction of recreational facilities on the City of Willimantic-owned parcel during 1976. This recreation area could seek to serve residents of the West End of the City. The City hopes to receive as gifts both the State of Connecticut-owned parcel (which adjoins the City-owned parcel), and the American Thread Company-owned parcel (which is adjacent to an existing City park). The fourth parcel is already in Town ownership. The four parcels are presently undeveloped, but some railroad tracks exist on the City-owned parcel.

Among the topics covered in this report are:

1. The suitability of the river and its banks for recreational use, principally for boating and fishing.
2. The possibilities of using abandoned cinder-based railroad beds for recreational purposes such as bicycle trails.
3. Enhancement of wildlife potential.
4. Suitability of the sites for camping, hiking, bicycling, field games, and other recreational development.
5. Opportunities to increase visual/aesthetic aspects of the sites for recreational or wildlife potential.
6. Development of outdoor nature observation trails or exhibit center.

LOCATION OF RECREATION SITES



CITY OF WILLIMANTIC

STATE OF CONNECTICUT

TOWN OF WINDHAM
AMERICAN THREAD COMPANY

EVALUATION

TOPOGRAPHY AND GEOLOGY

The four parcels of land reviewed in Willimantic, Connecticut, are all situated bordering the Willimantic River. In many respects the sites are similar and reflect both glacial and fluvial processes that have occurred in southern New England. Physiographically, the Willimantic River drainage is located in the eastern high-land portion of the state.

Bedrock geology of the area consists of highly metamorphosed crystalline rocks. Exposure of rock is common in the upland areas and along the valley walls with occasional outcroppings observed in the valley floor proper. Observations of bedrock show gneisses to be dominant with subsiding amounts of schists and minor veins of intruded pegmatitic material. Folding and fracturing of rock are evident in most outcroppings and serve as evidence of a high degree of deformation and complex structure.

All four sites are overlain by variable thicknesses of unconsolidated materials. Rock is exposed only in proximity to the City of Willimantic parcel at the Bridge Street crossing of the Willimantic River. In most instances, thickness of unconsolidated materials has been mapped in the range of several tens of feet with maximums of over 100 feet.

The materials overlying rock in all four sites are products of glaciofluvial processes. The top few feet of surficial material at the (upper) Windham site and most of the (middle) City of Willimantic and State of Connecticut sites are high silt and organic matter, having been deposited in swamp and flood back water environments. Directly beneath this, and exposed at the surface in other locations, is an areally extensive gravel cap of variable thickness. In areas of thick unconsolidated fine grained material is found beneath the gravel cap.

Because of the lack of elevation above the river's surface and relative flatness of the land, all four sites are characterized by a very shallow water table and seasonal flooding. When observed a short time after the official review date, the upper and middle sites were submerged under a few feet of water. Portions of the (lower) American Thread Company site were above the flood waters at this time but the recurrence interval of that flood was only five years.

In terms of land use of the four sites, the susceptibility to annual flooding is the major environmental factor of concern. Marshy conditions over most of the upper site probably dictate as open space usage. The middle and lower sites, although somewhat floodprone, seem to exhibit good surface drainage providing dry solid ground in times of mean and low flow stages of the Willimantic River. Passive recreation such as nature trails, canoeing and fishing should be considered as viable and perhaps the best suited uses of these sites.

SOILS

Detailed soils maps of the four sites are given in the Appendix of this report. As the maps are enlargements from the original field-mapping scale of 1320'/inch, the soil boundary lines should not be viewed as absolute boundaries, but rather as

guidelines to the distribution of soil types on the property.

The soil maps, and the accompanying soil charts showing limitations for certain land uses indicate that the four sites are all subject to periodic or seasonal flooding. The sites are primarily composed of Natural Soil Group E, floodplain soils which have been water-deposited and which presently are a part of the Willimantic River floodplain system.

The soils of the Natural Soil Groups E-1 and E-2 occur on higher and intermediate levels for stream floodplains. They have a good moisture holding capacity for plant growth. The soils of group E-2 have a moderately-high seasonal water table that remains within 12 to 20 inches of the surface during wet periods. The soils in these groups are best suited for open space uses. Although the hazard of flooding severely limits these soils for intensive recreational development, the floodplains and lands adjacent to streams have many ecological values and their retention for well planned natural resource development is in the public interest. During the season of use, these soils are well-suited for picnicking, camping, and play areas. Habitat for openland and woodland wildlife species is easily established, improved, or maintained on these soils. They are well suited to a wide variety of desirable food and cover plants.

The poorly drained soils in Natural Soil Group E-3a have a high seasonal water table that remains within 6 inches of the soil surface during the wettest part of the year. This high water table often persists into late spring and may recur during periods of high stream flow. The very poorly drained soils in Group E-3b have water ponded on the surface for significant periods in winter and spring. There is a high water table during most of the year that usually remains within 3 feet of the soil surface throughout the year. These areas have severe limitations for use as picnic areas, camp sites, and play areas. These soils are also poorly suited for production of openland wildlife habitat.

CITY OF WILLIMANTIC AND STATE OF CONNECTICUT-OWNED PARCELS

These two parcels are contiguous comprising approximately 50 acres. Both are bounded by the Willimantic River on the south and the city of Willimantic on the north. With the exception of railroad right of way, (there presently exists a single railroad track that is used daily by Penn. Central) both areas are undeveloped and are covered with natural vegetation. The area is about 90% open with the principal trees present being pitch pine, white pine, gray birch, cherry and red maple. Several old stream meanders of the Willimantic River have either high water table most of the year or shallow water during normal wet periods. During dry periods, water at the surface would disappear. The shallow ponds have vegetative growth along the edges which furnish some food and cover for wildlife. Along the river this vegetation is a thick tangle of trees, shrubs, and vines with wetland plants in poorly drained areas. Some of this growth is silky dogwood, common alder, winterberry, buttonbush, leatherleaf and elderberry. Some of the shrub-type growth is being crowded out by tree growth such as red maple. Along the railroad right of ways the area is higher, has better drainage and is vegetated by a stand of grass, primarily little bluestem. Although narrow in width averaging approximately 500 ft. the area is long, approximately 1 1/4 miles. This creates a significant environmental corridor along the edge of the Willimantic River not only for wildlife but for "buffering" the river to help protect water quality.

As mentioned earlier, much of these two parcels is floodprone. This would include the present water areas and soils mapped Ondawa, Suncook, Podunk, and Saco. Any improvements of the wetlands such as digging or dredging would have to be approved by the Town of Windham, Inland-Wetland Commission. Because of the land being surrounded by private property, easy access to this long narrow strip is not available at the present time.

Most of the area between the old road bed and the River should be left in its natural state. This area has considerable aesthetic value. Over use or recreational development could drive out existing bird and wildlife populations. Although considerable portions of these two sites are subject to periodic flooding, the associated wetlands (marshes and swamps) are excellent nesting areas for waterfowl and other birds. With some careful planning under the direction of a Wildlife Biologist some of the area could be improved by creating additional small ponds. Also additional waterfowl and other bird foods could be added to supplement present food supply.

Water Resources

Shallow wetlands present could be improved by:

- a. A herringbone system of level ditches. Ditches to be about 25 feet wide. Half the ditch will be 5 feet deep and the other half will be 1 foot deep. Spoil piles to be placed so that soil will not erode back into the ditch. Spoil piles to be seeded with a seed mixture that will encourage wildlife such as - Reed's Canary grass, tall fescue or orchard grass.
- b. Dig potholes with a minimum surface area of 7200 sq. feet or dimensions of 60 by 120 feet. Depth-minimum 3', maximum 5'. All disturbed areas to be seeded. A soil test being the satisfactory method of determining amounts of lime, fertilizer at seeding and fertilizer for topdressing. A general recommendation being per acre and to be used as a guide only.

Lime - 2 tons per acre.

Fertilizer for topdressing annually - 400 lbs. of 10-10-10 per acre.

Red maple, elm, graybirch and cherry now competing with fruiting shrubs could be removed. Cutting of all woody vegetation should be avoided.

Open Land - Including Well Drained and Moderately Well Drained Sections

Accessible areas should be mowed with a rotary of flail-type mower at least once every other year. This will keep down undesirable woody vegetation. The present vegetative cover is good wildlife habitat but lacks winter food sources and cover and presents a bleak landscape for the human element.

If areas are to be improved for upland wildlife habitat, both cover-type trees such as white pine and hemlock or fruiting shrubs such as autumn olive, highbush cranberry, silky dogwood and amur honeysuckle could be planted. Both the conifers and fruiting shrubs are available from the State of Connecticut Forest Nursery.

Fish and Wildlife Habitats

Collectively these two parcels create a "significant" natural wildlife corridor area. Due to the closeness of the river, and the wet floodplain soils, the area is naturally attractive to waterfowl, providing excellent breeding and nesting habitat. Woody vegetation includes American elm, red maple, blueberry, grape vine, birches, willow, cherry, brambles, oak and silky dogwood. The stand of grass (little bluestem) adjacent to the railroad coupled with the mixture of woody vegetation creates additional edge, and provides high quality food and cover to a variety of small mammals and birds. Waterfowl such as black and wood ducks, seasonal songbirds as well as year round songbirds and woodpeckers, squirrels, cottontail rabbits, raccoon, pheasants, ruffed grouse and woodcock utilize areas such as this. These tracts are also well suited for fishing and as the Willimantic River is cleaned up, it will probably be stocked with trout. Presently some trout drift downstream from stocked areas upstream.

Historic Mention

The site also contains the remains of an old railroad roundhouse and possibly other historic railroad features. These should be identified and preserved for human interest. The stonework of the roundhouse is in excellent condition and should not be a hazard to visitors to the site.

Recreation and Management Suggestions

These two parcels exhibit the greatest potential for multiple recreation use. Going on the assumption that vehicular access will not be provided, the recreational experiences will be limited to pedestrians or bicyclists. There is a need to develop a better access from Bridge Street motor vehicles (maintenance) and to develop parking facilities for visitors. Any vehicular access point should probably be gated and locked at night.

Bicycle and pedestrian trails could be established on the cut and fill portion of the land where the old railroad bed is presently located. A barricade or fence should be installed at the end of the trestle where the railroad crosses the Willimantic River to prevent or reasonably discourage passage across these tracks. Although the thin tire bicycles usually require a smooth paved surface, a well-packed small cinder base associated with railroad beds should suffice initially. The installation of paved or smoother bicycle trail surfaces could be considered by the City if a demand appears.

Both parcels lend themselves readily to outdoor classroom activities. Along the River, a number of self-guided nature trails and picnic spots appears feasible. A combination nature walk/bird-watching/interpretive trail could be easily established in any non-flooded portions of the parcels. Trees and other vegetative species could be labelled to illustrate the different types of vegetation found along the trail. In the seasonally wet soil areas, a more expensive boardwalk trail could be built in order to allow visitors to pass through a wet, red maple swamp environment. Trees can also be labelled in this plant community. Trails that traverse wetland areas via low boardwalks exist in the Audubon Larsen Preserve in Fairfield, Connecticut, and also in the Cedar Swamps on Cape Cod in the National Seashore Lands. Local schools or scout groups could be utilized to key down and label such species and the completed project could then be used as an adjunct to education in the local schools. Scouts could help brush out trails.

The old railroad roundhouse could possibly be utilized as a "field classroom" by installing R.R. tie or other type benches on its inside perimeter. The history of the roundhouse in railroading could itself be brought into the learning experience.

Ice skating could be offered in the .6 acre water (w) area found west of the railroad roundhouse. It is a small area, but some skating could be accommodated.

Swimming and canoeing activities appear compatible, however, studies are needed to determine access for launching areas, as well as facilities for swimming activities (bath houses) etc. The feasibility of installing a boat launching site near the eastern most end of the tract should be investigated as well as parking area for boat users. In any event a designated point of access will have to be provided whether it is for vehicles or pedestrians/bikers.

At least minimum toilet facilities should be installed if the above uses are instituted. Two pit-type toilets should suffice and would probably best be located in proximity to the roundhouse. Health Department regulations regarding distance from waterways, etc. would, of course, have to be adhered to when locating them. With no vehicular access presently available or planned some disadvantages are inherent:

- 1) Maintenance crew access - cleaning of toilets, garbage removal, etc. would be done by walk-in crew.
- 2) Emergency vehicle access - particularly ambulance would be precluded.

The prevention of vehicular traffic, however, will enhance the wildlife habitat/potential of the sites. For these reasons, intensive recreational use considerations should probably not be pursued since the area offers this favorable wildlife habitat and has built in topographical limitations. As the City of Willimantic continues to grow and spread out, an open space area virtually within city limits is a desirable feature to retain.

Further improvements to the sites, especially those to improve and maintain wildlife and aesthetic values, would be compatible with urban Willimantic. The two sites are naturally isolated from urban development, but are close enough to provide a quality outdoor experience. Use of the sites by hikers should be encouraged. The site could provide a safe hunting area as it is adjacent to a State stocked hunting area for upland birds. Habitats accessible to upland bird hunters is fast diminishing due to rural development and land posting against trespassers. The State will stock birds in areas open to hunting. A limited season could be established. Consult a Fish and Game Biologist for particulars.

It is important to remember that habitat of this type can satisfy many varied users with a minimum of maintenance and regulations. Unlimited use (within reason) will provide four season recreational opportunities for everyone.

AMERICAN THREAD COMPANY LAND

This parcel is bounded by U.S. Route 6 to the north, a town recreation area on the east, and the Willimantic River, which comprises a major streambelt, on the west and south. Streambelts are natural environmental corridors that comprise the

most valuable water related values of a town, region or watershed. These areas form a link with many other features. The major components of a streambelt system such as this one are: the stream itself; adjacent land subject to stream overflow (the designated Natural Soil Group E soils illustrated on the soil map in the Appendix); adjacent lands with special resources of public or environmental value such as the existing wildlife habitats characteristic of all four of the sites reviewed by the Team.

About one-half of the area is wooded, and the other half is in an open state. Vegetation is primarily hardwood growth with scattered white pine. The woody vegetation is an uneven stand with some good quality trees or specimen trees, principally, the white pine. Principal species present are: black birch, shagbark hickory, hophornbeam, black oak, white pine, white ash, white oak, elm and American planetree (sycamore). Shrub-type vegetation present: sumac, (smooth), witchhazel, tatarian honeysuckle and dogwood (silky and gray). This site represents the northern terminus of a natural corridor which continues south along both banks of the river. Natural access is available to the river on this site. Between the "cut and filled" portions of the site and the flatter natural floodplain soils the bank is quite steep quickly flattening out on the floodplain soils where tree and shrub growth is of best quality. Habitat provided to wildlife is primarily woodland type (trees shrubs and vines) for small mammals and birdlife. The presence of the river and the grassy areas to the east increase the value of this small area.

About one-half this parcel would be subject to flooding. Of the area subject to flooding, about 2/3 is well drained recent floodplain sediments. These sediments are normally deeper than 10 feet and are generally loamy sands and coarser textured materials. These soils flood occasionally and are rapidly permeable in the subsoil.

Historic Mention

This area contains a rock lined sluiceway which in past years was used as part of an electrical power generating system. Also present is the old powerhouse and dam which impounds water on the Willimantic River. The present sluiceway is a hazard. This should either be filled in and seeded, or fenced in so a child cannot climb in. There is a fence on the market with the vertical chains so close together that is it impossible for a child to fit his small foot in the links. Stones present could be a hazard if not removed.

Valuable Features

This area serves as buffer strip between the river and uplands. As such it has natural values such as erosion and sediment control which help protect the river system and therefore, should be preserved and protected.

Wildlife Habitats

This area provides woodland type wildlife habitat to small mammals and birdlife including but not limited to cottontail rabbit, gray squirrel, raccoon, seasonal songbirds and waterfowl such as black ducks. Ibotia privet, a shrub, is extensive in the area of the old sluiceway. Other trees and shrubs present include oak, red maple, white pine, black birch, shagbark hickory, blueberry, speckled alder, viburnums, and sycamore. The wooded area compliments the grass areas in the

adjacent playgrounds and along with the river, help create edge for wildlife. The smallness of the area does somewhat limit its capability for wildlife, however, the quality of existing conditions is good.

Recreation and Management Suggestions

Two uses that would be compatible to the adjoining recreation park would be a "creative playground" and picnicking. The creative playground is inexpensive to build. Natural areas are used. Stumps and rocks present could be used. Swings made from tires, sand pits, horizontal ladders could be made from old utility poles, crude benches, horses and animals are made from waste wood products. The Recreation Department in the Town of Plainfield is building a creative playground in the Wauregan section of that town. The picnic area would require constant cleaning and policing, plus picnic tables might have to be of the permanent-type and not subject to damage by flooding.

Access paths to the River for fishing and canoeing could also be provided. The River is presently being cleaned up and eventually will be stocked with trout. It presently contains a few trout that drift downstream or move upstream from the Natchaug River which is just below.

Some minor stream improvement to improve trout habitat might be done downstream of dam in cooperation with and use of local fly fishing clubs and other local fish and game clubs.

The existing sluiceway if allowed to remain for historic reasons should be fenced to protect children. Planting of fruiting shrubs for songbirds along the fence row may be feasible. Large scale removal of vegetation should be discouraged, however, selected cutting is desirable in order to open up river views. Personnel from the Forestry Unit at the State Nursery in Voluntown may be contacted for this service. Evergreens should be introduced to improve aesthetics and to provide winter cover and food for wild birds. Picnic areas should be developed in these areas with attractive river views. A parking area for \pm 20 cars should be developed along the present fence line. Sanitary facilities should also be installed.

This parcel also has the potential for a very short nature walk. It has some limiting factors which could be overcome if sufficient funds are available. Access is at present restricted by a chain link fence (easily remedied by gating) and a sluiceway which limits access/egress pretty much to the easternmost end of the parcel. Another access point would be made available if a fenced walkway were established over the westernmost end of the sluiceway (at its control structure). This merits consideration as it would enable people to traverse most of the parcel without backtracking. If done, a second gate should be planned for installation in the existing fence.

TOWN OF WINDHAM LAND

With the exceptions of the railroad right-of-way and a town well, this parcel is an undeveloped floodplain. The Willimantic River bounds the area on the west and south, while the railroad runs generally along the east boundary. The town and county boundaries run along the northerly edge.

Most of the area is relatively flat, and comprised of old fields and woody vegetation. The Willimantic River has meandered over much of this area creating numerous small "oxbow" ponds interspersed in wooded areas containing a relatively dense growth of hardwood trees, shrubs and vines. The old field areas are beginning to revert to woody vegetation primarily silky dogwood and weedy plants. As with the other parcels reviewed, there is a highly desirable mix of openland, thick wooded areas, wet pockets and the river. Wildlife habitat is of highest quality to waterfowl, small mammals and birdlife. This area also provides a natural corridor along the Willimantic River.

Wildlife Habitats

This parcel provides food and cover to wildlife through a mix of old fields and wooded floodplain areas. The field contains little bluestem as the dominant grass, and a young shrubby stand of silky dogwood. The borders of the field and wooded areas are mixed hardwoods containing oaks, red maple, willows, shadbush, apple, grape vine, multiflora rose and other dense shrubby vegetation. Breeding and nesting habitat for waterfowl, primarily black ducks and wood ducks is excellent. There are a number of small ponds with brushy borders, trees and some grasses. Other wildlife values are similar to those pertaining to the previously discussed parcels.

Recreation and Management Suggestions

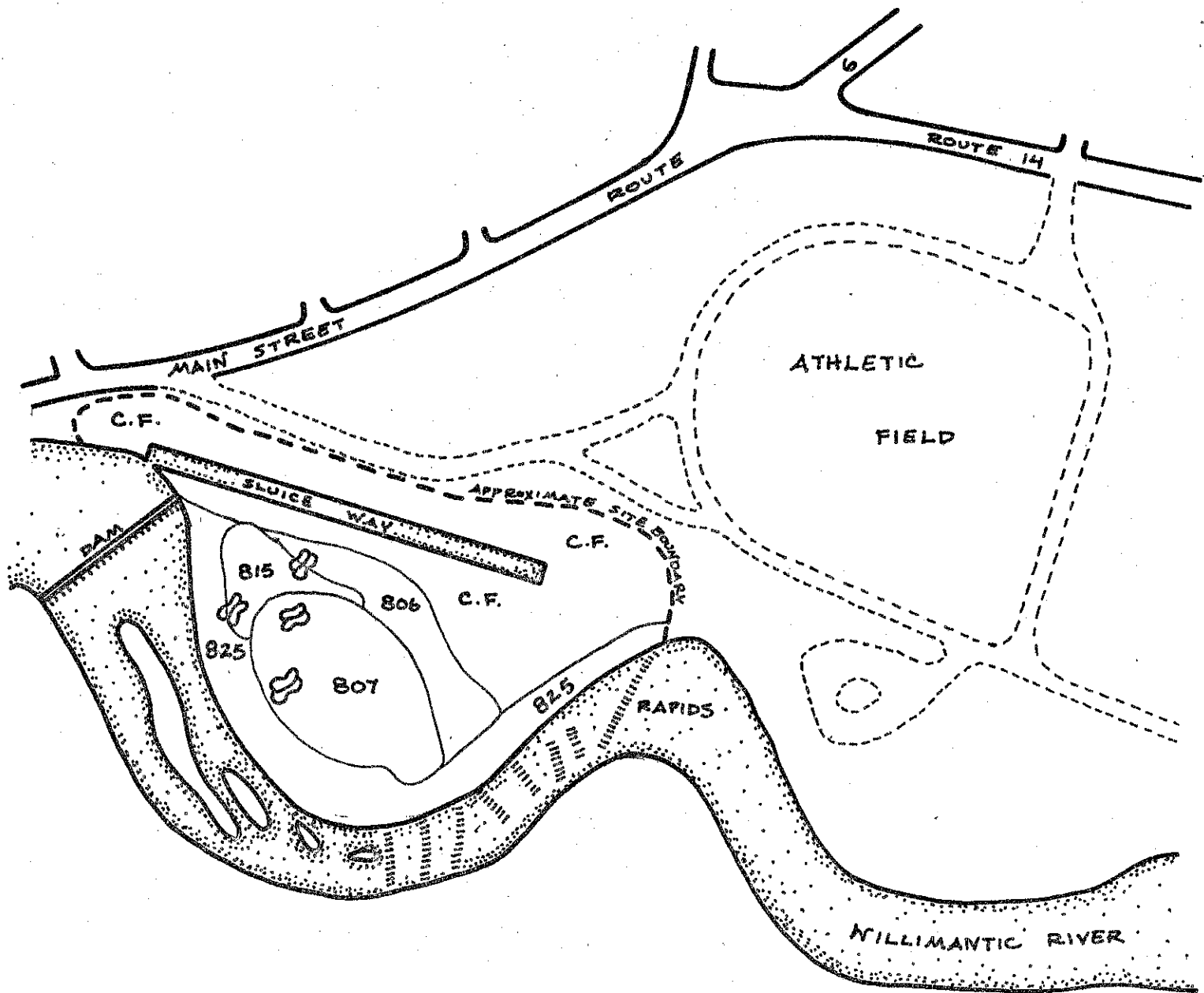
The field area provides the opportunity for developing annual food plots for wildlife. Again there is potential for canoeing if access areas are provided. Fishing, picnicking, trails and possibly winter activities such as cross country skiing may be feasible. As with other areas a minimum of disturbance to vegetation should be encouraged.

Hiking in this area during the nesting season should be discouraged. Likewise, intensive recreation in this area should be avoided because of the potential pollution threat to the public water supply well. If the area is to be managed for upland and wetland wildlife habitat, development for yearly maintenance should also be included in the plan. In general, this parcel has very limited potential for recreational use, and should be managed as a wildlife preserve.

APPENDIX

Natural Soil Group	Map Symbol	Mapping Unit	City of Willimantic		State of Connecticut	
			Property Acres	Percent of Total Acres	Property Acres	Percent of Total Acres
A-1a	67B	Windsor ls 0-3%	0.8	2%	--	--
A-1b	60C	Hinckley gsl 3-15%	0.6	2%	0.8	6%
E-1	806	Ondawa fsl	1.4	4%	5.2	39%
E-1	807	Suncook lfs	8.6	23%	2.2	16%
E-2	815	Podunk fsl	5.8	16%	2.4	18%
E-3b	823	Saco silt	4.7	13%	1.7	13%
	W	Water	0.6	2%	--	--
	C.F.	Cut & fill	14.5	38%	1.1	8%
		Total	37.0	100.0%	13.4	100.0%

SOIL MAP
 WILLIMANTIC RIVER RECREATION SITE
 AMERICAN THREAD COMPANY
 WINDHAM, CONNECTICUT



The map is an enlargement from the original 1320'/inch scale.

Prepared by: UNITED STATES DEPARTMENT OF AGRICULTURE,
 Soil Conservation Service.

Advance Copy, Subject To Change

January 1976

 EXTREMELY STONY AREA



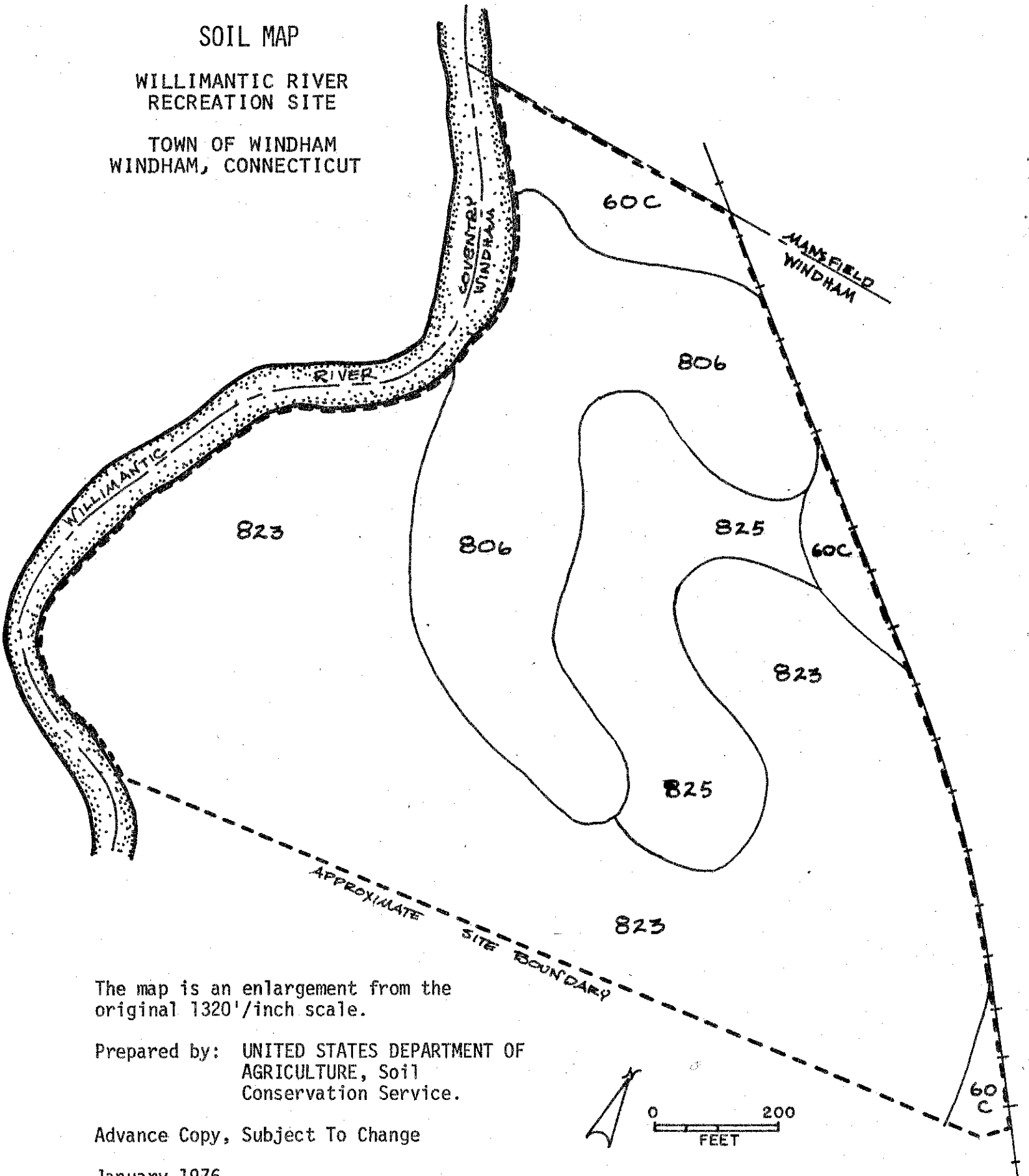
American Thread Parcel of Land

<u>Natural Soil Group</u>	<u>Map Symbol</u>	<u>Mapping Unit</u>	<u>Acres</u>	<u>Percent of Total Acres</u>
E-1	806	Ondawa fine sandy loam	.6	10%
E-1	807	Suncook loamy fine sand	1.1	18%
E-2	815	Podunk fine sandy loam	.3	5%
E-3b	825	Saco silt loam	1.2	20%
		Cut and fill	2.8	47%
	Approximate Total		6.0 acres	100%

SOIL MAP

WILLIMANTIC RIVER
RECREATION SITE

TOWN OF WINDHAM
WINDHAM, CONNECTICUT



The map is an enlargement from the original 1320'/inch scale.

Prepared by: UNITED STATES DEPARTMENT OF
AGRICULTURE, Soil
Conservation Service.

Advance Copy, Subject To Change

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TOWN OF WINDHAM LAND

(Parcel that borders I-84 Route)

<u>Natural Soil Group</u>	<u>Map Symbol</u>	<u>Mapping Unit</u>	<u>Acres</u>	<u>Percent of Total Acres</u>
A-1b	60C	Hinckley gsl 3-15%	1½	3%
E-1	806	Ondawa fsl	7	22%
E-3b	823	Saco silt	20½	63%
E-3b	825	Saco, shallow	3½	12%
		Total approx.	32½	100%

SOIL LIMITATIONS FOR CERTAIN LAND USES

		<u>Wildlife Habitat Suitability</u>						
		<u>Potential as Habitat for:</u>						
		<u>Limitations for Recreation</u>						
<u>Map Symbol</u>	<u>Camp</u>	<u>Picnic</u>	<u>Play Grounds</u>	<u>Paths and Trails</u>	<u>Openland Wildlife</u>	<u>Woodland Wildlife</u>	<u>Wetland Wildlife</u>	
67B Windsor	Moderate, Too sandy.	Moderate, Too sandy.	Severe, Too sandy.	Moderate, Too Sandy.	Good	Good	Very Poor.	
60C Hinckley	Severe, slope.	Severe, slope.	Severe, slope.	Moderate.	Good	Good	Very Poor.	
806 Ondawa	Severe, floods	Moderate, Floods.	Moderate, floods.	Slight.	Good	Good	Very Poor.	
807 Suncook	Moderate, Too sandy.	Moderate, Too sandy.	Moderate, Too sandy.	Moderate, Too sandy.	Fair	Poor	Very Poor.	
815 Podunk	Severe, floods.	Moderate, floods.	Moderate, floods.	Slight.	Good	Good	Poor.	
823, 825 Saco	Severe, floods, wet.	Severe, wet.	Severe, floods, wet.	Severe, wet.	Poor	Poor	Good	

SOIL INTERPRETATIONS FOR URBAN USES

The ratings of the soils for elements of community and recreational development uses consist of three degrees of "limitations:" slight or no limitations; moderate limitations; and severe limitations. In the interpretive scheme various physical properties are weighed before judging their relative severity of limitations.

The user is cautioned that the suitability ratings, degree of limitations and other interpretations are based on the typical soil in each mapping unit. At any given point the actual conditions may differ from the information presented here because of the inclusion of other soils which were impractical to map separately at the scale of mapping used. On-site investigations are suggested where the proposed soil use involves heavy loads, deep excavations, or high cost. Limitations, even though severe, do not always preclude the use of land for development. If economics permit greater expenditures for land development and the intended land use is consistent with the objectives of local or regional development, many soils and sites with difficult problems can be used.

Slight Limitations

Areas rated as slight have relatively few limitations in terms of soil suitability for a particular use. The degree of suitability is such that a minimum of time or cost would be needed to overcome relatively minor soil limitations.

Moderate Limitations

In areas rated moderate, it is relatively more difficult and more costly to correct the natural limitations of the soil for certain uses than for soils rated as having slight limitations.

Severe Limitations

Areas designated as having severe limitations would require more extensive and more costly measures than soils rated with moderate limitations in order to overcome natural soil limitations. The soil may have more than one limiting characteristic causing it to be rated severe.

